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EXAMINER

NGUYEN, THAI

ART UNIT

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4124

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/568,372 | Applicant(s) BEELEN ET AL. | |
| | Examiner THAI N. NGUYEN | Art Unit 4124 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The word "susceptible" in line 5 is vague and indefinite; please clarify the limitation of the claimed invention in claim 12.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 7-10, and 12-15 are rejected under 35 U.S.C. 102(b) as being unpatentable by Pirolli et al (US Patent No.: 6,098,064) (hereafter referenced as Pirolli).

(Claim 1 recites), *a method of caching data assets in a system (10) comprising at least one server (20) and at least one user device (50), each device (50) including a cache arrangement (120, 130, 140) comprising a plurality of caches (120, 130, 140) for storing requested data assets therein, the method including the steps of: (a) arranging for one or more data assets to be stored in a first memory of said at*

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least one server (20) and data definitions corresponding to said one or more data assets in a second memory of said at least one server (20) (Pirolli discloses a data asset is stored at a memory pointer (first memory) and the data asset's definition data stored at a second pointer of a proxy server (Pirolli, column 6 lines 9-20, column 5 lines 3-7, column 1 lines 36-40, FIG. 3 #202, #208).); (b) arranging for said at least one server (20) to be responsive to one or more data requests from said at least one user device (50) by returning to said at least one user device (50) corresponding one or more requested data assets, wherein said one or more requested data assets are provided to said at least one user device (50) with associated data definitions for controlling storage and processing of said one or more requested data assets in said at least one user device (50), said at least one server (20) thereby being operable to at least partially control the cache arrangement (120, 130, 140) in said at least one device (50) (Pirolli discloses a client computer can fetch a document from a server if the document is not available in the client's cache and this requested data asset and its associated definitions are stored on the client computer (Pirolli, lines 46-48, column 6 lines 9-16). Pirolli discloses a proxy server containing a Prefetch and Cache module to calculate the need probability of a document to fetch and store in its cache (proxy server's) (Pirolli, column 5 lines 3-25, column 4 lines 53-61, FIG. 3 #202, #208). The Prefetch and Cache module in the proxy server can control what a client can receive and store by updating its local cache (proxy server's) (Pirolli, column 7 lines 30-49).).

(Claim 2 recites), a method according to Claim 1, wherein said plurality of caches (120, 130, 140) in each user device (50) are operable to store both requested assets and their associated definitions (As referenced in claim 1, Pirolli further discloses a client computer can store both

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requested assets and their associated definitions in either RAM or disk (Pirolli, column 6 lines 11-16, FIG. 2 #210, #212).).

(Claim 3 recites), *a method according to Claim 1, wherein said plurality of caches (120, 130, 140) of said cache arrangement (120, 130, 140) are designated to be of mutually different temporal duration, and said definitions associated with said one or more requested data assets are interpretable within said at least one user device (50) to control storage of said one or more requested data assets in appropriate corresponding said plurality of caches (120, 130, 140)* (As referenced in claim 1, Pirolli further discloses cache memory includes RAM and disk memory which are of mutually different temporal durations (Pirolli, column 4 lines 24-26). It is known that RAM's data is lost when a computer's power is reset but data stored in disk memory (hard drive) is kept for longer duration even if its power is reset. Pirolli further discloses the Prefetch and Cache of the client computer can use definition data to control storage of requested data assets in RAM or hard drive (Pirolli, column 7, lines 31-49).).

(Claim 4 recites), *a method according to Claim 1, wherein said at least one user device (50) includes:*
(a) content managing means (100) for interpreting requests and directing them to said at least one server (20) for enabling said at least one user device (50) to receive corresponding one or more requested data assets (As referenced in claim 1, Pirolli further discloses a client computer initially examines its local cache for a requested document and if the document is not available in the local cache then the client fetches the document from a server (Pirolli, column 1 lines 41-48).); *and (b) cache managing means (110) for directing said one or more requested data assets received from said content managing means (110) to appropriate said plurality of caches (120,*

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130, 140) depending on said definitions associated with said one or more requested data assets (Pirolli further discloses documents stored in local cache with the lowest need probabilities on the need list are relegated to a server (cache memory) when there is in sufficient space in the local cache (Pirolli, column 3 lines 23-29, FIG. 2 #220, FIG. 3 #208).).

(Claim 7 recites), a method according to Claim 4, wherein each user device (50) further includes interfacing means (200) for interfacing between at least one operator (70) of said at least one user device (50) and at least one of said content managing means (100) and said cache managing means (110), said interfacing means (200): (a) for conveying asset data requests from the operator (70) to said at least one of said content managing means (100) and said cache managing means (110) for subsequent processing therein (As referenced in claim 4, Pirolli further discloses Netscape Navigator®, Microsoft Explorer as internet client that services user commands to fetch and display web pages (Pirolli, column 4 lines 16-19, 31-34). Pirolli further discloses the internet client operating on a conventional operating system which includes a cache manager responsible for storing and retrieving data from cache memory (Pirolli, column 4 lines 19-26); and (b) for rendering and presenting to said at least one operator (70) said requested data assets retrieved from at least one of said cache arrangement (120, 130, 140) and directly from said at least one server (20) (As described above, Pirolli describes the cache manager storing and retrieving data from cache memory and an internet client that services user commands and displays web pages (Pirolli, column 4 lines 16-26).).

(Claim 8 recites), a method according to Claim 7, wherein the interfacing means (200) is operable to provide a graphical interface to said at least one operator (70) (As referenced in claim 7, Pirolli

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further discloses a user can request documents in the form of a mouse click which is interpreted to be part of a GUI (Pirolli, column 6 lines 21-22).).

(Claim 9 recites), *a method according to Claim 7, wherein the interfacing means (200) in combination with at least one of said content managing means (100) and said cache managing means (110) is operable to search said cache arrangement (120, 130, 140) for one or more requested assets before seeking such one or more requested assets from said at least one server (20)* (As referenced in claim 7, Pirolli further discloses a client computer (cache manager) examines its local cache for the requested document and if the requested document is not available it will fetch the requested document from a server (after the user has enter the request through the browser) (Pirolli, column 1 lines 41-48).).

(Claim 10 recites), *a method according to Claim 9, wherein said cache arrangement (120, 130, 140) is firstly searched for said one or more requested assets and subsequently said at least one server (20) is searched when said cache arrangement (120, 130, 140) is devoid of said one or more requested assets* (As referenced in claim 9, Pirolli further discloses a client computer (cache manager) examines its local cache for the requested document and if the requested document is not available it will fetch the requested document from a server (after the user has enter the request through the browser) (Pirolli, column 1 lines 41-48, FIG. 2 #208).).

(Claim 12 recites), *a method according to Claim 1, wherein said cache arrangement (120, 130, 140) is preloaded with one or more initial data assets at initial start-up of its associated user device (50) to communicate with said at least one server (20), said one or more initial data assets being susceptible to*

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being overwritten when said user device (50) is in communication with said at least one server (20) (As referenced in claim 1, Pirolli further discloses a cache manager stores and retrieves data from RAM and disk memory (hard drive) (Pirolli, column 4 lines 24-30). It is known in the art that when the client computer is rebooted, the data previously stored on the hard drive will still be available at start up and as Pirolli further discloses, if the document is not current the client will fetch (communicate) the new document from a web server and stores it on the client computer to replace the old document (Pirolli, FIG. 6 #606, #610, #612, #602).).

(Claim 13 recites), a method according to Claim 1, wherein one or more of the data assets are identified by associated universal resource locators (URL) (As referenced in claim 1, Pirolli further discloses documents being identified by an URL (Pirolli, column 6 lines 25-26).).

(Claim 14 recites), a method according to wherein said system (10) is operable according to first, second and third phases wherein: (a) the first phase is arranged to provide for data asset entry into said first and second memories (30, 40) of at least one server (20)) (Pirolli discloses a data asset is stored at a memory pointer (first memory) and the data asset's definition data stored at a second pointer of a proxy server (Pirolli, column 6 lines 9-20, column 5 lines 3-7, column 1 lines 36-40, FIG. 3 #202, #208).); (b) the second phase is arranged to provide for content download from said at least one server (20) to said cache arrangement (120, 130, 140) of at least one user device (50) and (c) the third phase is arranged to provide for content retrieval from at least one of said cache arrangement (120, 130, 140) of said at least one user device (50) and from said at least

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one server (20) (Pirolli discloses a document is fetched from a server and transmitted to the output destination (memory location or screen) specified at step 602 of FIG. 6 (Pirolli, column 6 lines 49-54).).

(Claim 15 recites), a system (10) for caching data assets, the system (10) comprising at least one server (20) and at least one user device (50), each device (50) including a cache arrangement (120, 130, 140) comprising a plurality of caches (120, 130, 140) for storing requested data assets therein, the system (10) being arranged to be operable: (a) to store one or more data assets in a first memory of said at least one server (20) and data definitions corresponding to said one or more data assets in a second memory of said at least one server (20 (Pirolli discloses a data asset is stored at a memory pointer (first memory) and the data asset's definition data stored at a second pointer of a proxy server (Pirolli, column 6 lines 9-20, column 5 lines 3-7, column 1 lines 36-40, FIG. 3 #202, #208).); (b) to arrange for said at least one server (20) to be responsive to one or more data requests from said at least one user device (50) by returning to said at least one user device (50) corresponding one or more requested data assets, wherein said one or more requested data assets are provided to said at least one user device (50) with associated data definitions for controlling storage and processing of said one or more requested data assets in said at least one user device (50), said at least one server (20) thereby being operable to at least partially control the cache arrangement (120, 130, 140) in said at least one device (50) (Pirolli discloses a client computer can fetch a document from a server if the document is not available in the client's cache and this requested data asset and its associated definitions are stored on the client computer (Pirolli, lines 46-48, column 6 lines 9-16). Pirolli discloses a proxy server containing a Prefetch and Cache module to calculate the need probability of a document to fetch and store in its cache (proxy server's) (Pirolli, column 5 lines 3-25, column 4 lines 53-61, FIG. 3 #202,

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#208). The Prefetch and Cache module in the proxy server can control what a client can receive and store by updating its local cache (proxy server's) (Pirolli, column 7 lines 30-49).).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pirolli in view of Yang et al (US Patent No.: 5,754,888) (hereafter referenced as Yang).

Regarding claim 11,

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A method according to Claim 9, wherein the cache arrangement (120, 130, 140) is progressively searched from caches with temporally relatively shorter durations (140) to temporally relatively longer durations (120)

As referenced in claim 9, Pirolli however fails to disclose searching cache memory with temporally relative shorter duration (RAM) to temporally relative longer duration (hard drive). Yang discloses searching RAM before searching a hard drive (Yang, column 8 lines 16-30). Since Pirolli and Yang are both related to data caching, it would have been obvious to one skilled in the art at the time of the invention to combine teachings of Yang to Pirolli's system with the motivation being to provide a better data caching system.

8. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pirolli in view of Cypher et al (US Patent No.: 6,484,240) (hereafter referenced as Cypher).

Regarding claim 5,

A method according to Claim 1 wherein, for each user device (50), said plurality of caches (120, 130, 140) comprises at least one read-once cache (140) arranged to store one or more requested data assets therein and to subsequently deliver said one or more requested assets a predetermined number of times therefrom after which said one or more requested data assets are deleted from said at least one read-once cache (140)

As referenced in claim 1, Pirolli further discloses deleting documents from cache (FIG. 8 #810). Pirolli however, fails to disclose plurality of caches comprises at least one read-once cache arranged to store one or more requested data assets therein and to subsequently deliver said one or more requested assets a predetermined number of

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times therefrom after which said one or more requested data assets are deleted from said at least one read-once cache. Cypher discloses access to read a cache line can be granted and revoked after the cache has been read (Cypher, column 5 lines 21-25). Since Pirolli and Cypher are both related to data caching, it would have been obvious to one skilled in the art at the time of the invention to combine teachings of Cypher to Pirolli's system with the motivation being to provide a read once cache and to delete the data after it has been read one.

Regarding claim 6,

A method according to Claim 5, wherein said predetermined number of times corresponds to a single read prior to data asset deletion

As referenced in claim 5, Cypher discloses access to read a cache line can be granted and revoked after the cache has been read once (Cypher, column 5 lines 21-25).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THAI N. NGUYEN whose telephone number is (571)270-7632. The examiner can normally be reached on Monday - Friday 8AM - 5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Pendleton can be reached on 571-272-7527. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

THAI N NGUYEN
Examiner
Art Unit 4124

/T. N. N./
Examiner, Art Unit 4124
3/9/2009

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